WHAT IS CLAIMED IS:

1. An apparatus for collection of cytomegalovirus (CMV) or a CMV infected cell, the apparatus comprising:

(a) a collector comprising a compound that binds CMV or the CMV infected cell; and

(b) a circuit (i) adapted for connection to the blood system of a patient, (ii) adapted for the flow of withdrawn blood therethrough, and (iii) in fluid communication with the collector.

2. The apparatus of claim 1, wherein

the circuit comprises an outlet line and a return line, each in fluid communication with the blood system of the patient; and

the circuit is adapted for withdrawal of blood from the patient's blood system via the outlet line, passage of the blood through the collector and the return of the blood to the blood system via the return line.

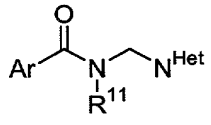
3. The apparatus of claim 1, wherein the compound is contained on a support within the collector.

4. The apparatus of claim 3, wherein the support is selected from the group consisting of beads, microspheres, nanoparticles and colloidal particles.

5. The apparatus of claim 2, further comprising a pump adapted to pump blood through the circuit.

6. The apparatus of claim 1, wherein the compound is a ligand for CMV US28.

7. The apparatus of claim 6, wherein the compound has the formula:



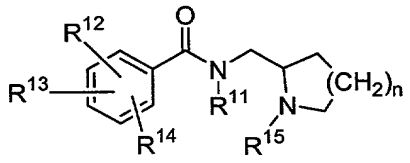
or is a pharmaceutically acceptable salt thereof; and wherein

Ar is a substituted aryl group;

R^{11} is a member selected from the group consisting of H and substituted or unsubstituted (C_1-C_4)alkyl; and

N^{Het} is a substituted or unsubstituted 4-, 5-, 6-, or 7-membered nitrogen heterocycle.

8. The apparatus of claim 6, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

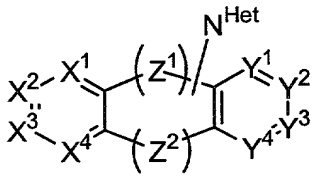
the subscript n is an integer of from 1 to 3;

R^{11} and R^{15} are members independently selected from the group consisting of H and substituted or unsubstituted (C_1-C_4)alkyl;

R^{12}, R^{13} and R^{14} are each members independently selected from the group consisting of H, hydroxy, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino and di(C_1-C_4)alkylamino;

with the proviso that at least one of R^{12}, R^{13} and R^{14} is other than

9. The apparatus of claim 6, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

X^1, X^2, X^3 and X^4 are each independently members selected from the group consisting of N and C-R^1, wherein R^1 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino;

Y^1, Y^2, Y^3 and Y^4 are each independently members selected from the group consisting of N and C-R^2, wherein R^2 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy,

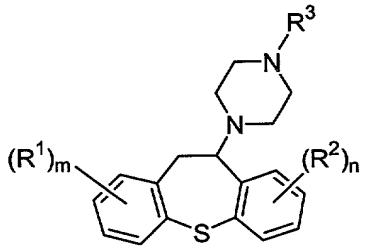
nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino;

Z^1 is a divalent moiety selected from the group consisting of (C_1-C_3)alkylene;

Z^2 is a divalent moiety selected from the group consisting of –O-, -S- and -N(R^3)- wherein R^3 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino; and

N^{Het} is a substituted or unsubstituted 4-, 5-, 6-, or 7-membered nitrogen heterocycle.

10. The apparatus of claim 6, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

the subscripts m and n are independently integers of from 0 to 3;

R^1 and R^2 are substituents independently selected from the group consisting of halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)alkylthio, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino; and

R^3 is a substituent selected from the group consisting of (C_1-C_4)alkyl, (C_1-C_4)haloalkyl and (C_1-C_4)acyl.

11. A device for collecting CMV or a CMV infected cell, the apparatus comprising a support and a compound that binds CMV and/or the CMV infected cell.

12. The device of claim 11, wherein the support is an implant device adapted for insertion into a patient.

13. The device of claim 12, wherein the implant device is adapted to be in contact with the blood of the patient.

14. The device of claim 1, wherein the implant comprises an absorptive material.

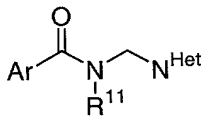
15. The device of claim 14, wherein the absorptive material is a surgical sponge.

16. The device of claim 15, wherein the absorptive material is made of a material selected from the group consisting of gelfoam, polyester and polyurethane.

17. The device of claim 11, wherein the support is a patch adapted for application to skin.

18. The device of claim 11, wherein the compound is a ligand for CMV US28.

19. The device of claim 18, wherein the compound has the formula:



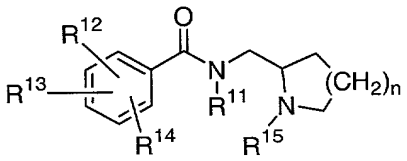
or is a pharmaceutically acceptable salt thereof; wherein

Ar is a substituted aryl group;

R^{11} is a member selected from the group consisting of H and substituted or unsubstituted $(C_1\text{-}C_4)$alkyl; and

N^{Het} is a substituted or unsubstituted 4-, 5-, 6-, or 7-membered nitrogen heterocycle.

20. The device of claim 18, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

the subscript n is an integer of from 1 to 3;

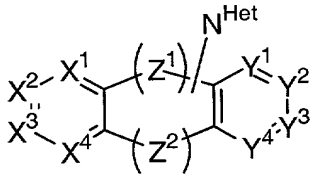
R^{11} and R^{15} are members independently selected from the group consisting of H and substituted or unsubstituted $(C_1\text{-}C_4)$alkyl;

R^{12}, R^{13} and R^{14} are each members independently selected from the group consisting of H, hydroxy, halogen, $(C_1\text{-}C_4)$alkyl, $(C_1\text{-}C_4)$alkoxy, $(C_1\text{-}C_4)$haloalkyl, $(C_1$-

C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino and di(C_1-C_4)alkylamino;

with the proviso that at least one of R^{12}, R^{13} and R^{14} is other than H.

21. The apparatus of claim 18, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

X^1, X^2, X^3 and X^4 are each independently members selected from the group consisting of N and C-R^1, wherein R^1 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino;

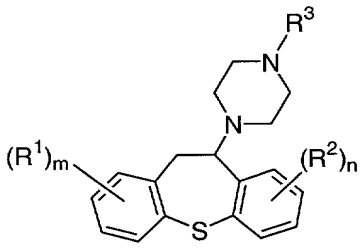
Y^1, Y^2, Y^3 and Y^4 are each independently members selected from the group consisting of N and C-R^2, wherein R^2 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino;

Z^1 is a divalent moiety selected from the group consisting of (C_1-C_3)alkylene;

Z^2 is a divalent moiety selected from the group consisting of –O-, -S- and -N(R^3)- wherein R^3 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino; and

N^{Het} is a substituted or unsubstituted 4-, 5-, 6-, or 7-membered nitrogen heterocycle.

22. The device of claim 18, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

the subscripts m and n are independently integers of from 0 to 3;

R^1 and R^2 are substituents independently selected from the group consisting of halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)alkylthio, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino; and

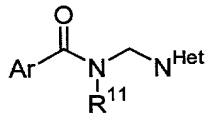
R^3 is a substituent selected from the group consisting of (C_1-C_4)alkyl, (C_1-C_4)haloalkyl and (C_1-C_4)acyl.

23. A method for collecting cytomegalovirus (CMV) or a CMV infected cell from a patient infected with CMV, the method comprising inserting a support comprising a compound that binds CMV and/or the CMV infected cell into the patient's blood system, whereby CMV or a CMV infected cell in the blood is collected at the support.

24. The method of claim 23, further comprising removing the implant device from the patient after CMV and/or CMV infected cells have accumulated at the implant device.

25. The method of claim 22, wherein the compound is a ligand for CMV US28.

26. The method of claim 25, wherein the compound has the formula:



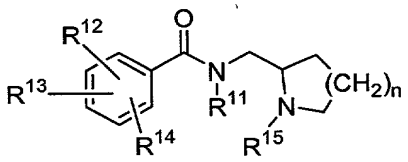
or is a pharmaceutically acceptable salt thereof; wherein

Ar is a substituted aryl group;

R^{11} is a member selected from the group consisting of H and substituted or unsubstituted (C_1-C_4)alkyl; and

N^{Het} is a substituted or unsubstituted 4-, 5-, 6-, or 7-membered nitrogen heterocycle.

27. The method of claim 25, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

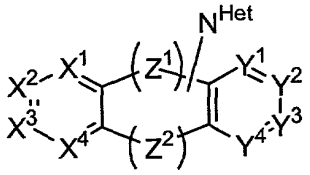
the subscript n is an integer of from 1 to 3;

R^{11} and R^{15} are members independently selected from the group consisting of H and substituted or unsubstituted (C_1-C_4)alkyl;

R^{12}, R^{13} and R^{14} are each members independently selected from the group consisting of H, hydroxy, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino and di(C_1-C_4)alkylamino;

with the proviso that at least one of R^{12}, R^{13} and R^{14} is other than H.

28. The method of claim 25, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

X^1, X^2, X^3 and X^4 are each independently members selected from the group consisting of N and C-R^1, wherein R^1 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino;

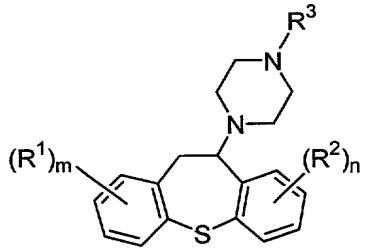
Y^1, Y^2, Y^3 and Y^4 are each independently members selected from the group consisting of N and C-R^2, wherein R^2 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino;

Z^1 is a divalent moiety selected from the group consisting of (C_1-C_3)alkylene;

Z^2 is a divalent moiety selected from the group consisting of –O-, -S- and -N(R^3)- wherein R^3 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino; and

N^{Het} is a substituted or unsubstituted 4-, 5-, 6-, or 7-membered nitrogen heterocycle.

29. The method of claim 25, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

the subscripts m and n are independently integers of from 0 to 3;

R^1 and R^2 are substituents independently selected from the group consisting of halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)alkylthio, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino; and

R^3 is a substituent selected from the group consisting of (C_1-C_4)alkyl, (C_1-C_4)haloalkyl and (C_1-C_4)acyl.

30. The method of claim 22, wherein the patient is a mammal.

31. The method of claim 30, wherein the patient is a non-human mammal.

32. A method for collecting cytomegalovirus (CMV) or a CMV infected cell from a patient infected with CMV, the method comprising contacting the patient's blood or a tissue that contains CMV or a CMV infected cell with a compound that binds CMV, whereby CMV or the CMV infected cell in the blood or the tissue is collected by the compound.

33. The method of claim 32, wherein contacting comprises contacting the patient's blood with the compound.

34. The method of claim 33, wherein contacting comprises withdrawing blood containing CMV or the CMV infected cell from the patient and flowing the blood through or into a collector that contains the compound, whereby CMV and/or the CMV infected cell binds to the compound in the collector.

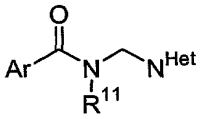
35. The method of claim 34, further comprising recirculating the blood back into the patient after the contacting step.

36. The method of claim 35, wherein the withdrawing, contacting and recirculating steps are performed continuously.

37. The method of claim 32, wherein the collector comprises a support material that contains the compound.

38. The method of claim 32, wherein the compound is a ligand for CMV US28.

39. The method of claim 38, wherein the compound has the formula:



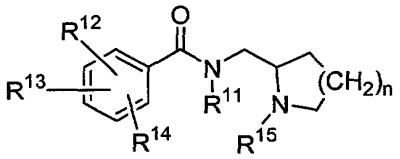
or is a pharmaceutically acceptable salt thereof; wherein

Ar is a substituted aryl group;

R^{11} is a member selected from the group consisting of H and substituted or unsubstituted $(C_1\text{-}C_4)$alkyl; and

N^{Het} is a substituted or unsubstituted 4-, 5-, 6-, or 7-membered nitrogen heterocycle.

40. The method of claim 38, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

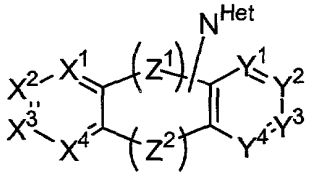
the subscript n is an integer of from 1 to 3;

R^{11} and R^{15} are members independently selected from the group consisting of H and substituted or unsubstituted $(C_1\text{-}C_4)$alkyl;

R^{12}, R^{13} and R^{14} are each members independently selected from the group consisting of H, hydroxy, halogen, $(C_1\text{-}C_4)$alkyl, $(C_1\text{-}C_4)$alkoxy, $(C_1\text{-}C_4)$haloalkyl, $(C_1\text{-}C_4)$haloalkoxy, nitro, cyano, $(C_1\text{-}C_4)$acyl, amino, $(C_1\text{-}C_4)$alkylamino and di$(C_1\text{-}C_4)$alkylamino;

with the proviso that at least one of R^{12}, R^{13} and R^{14} is other than H.

41. The method of claim 38, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

X^1, X^2, X^3 and X^4 are each independently members selected from the group consisting of N and C-R^1, wherein R^1 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino;

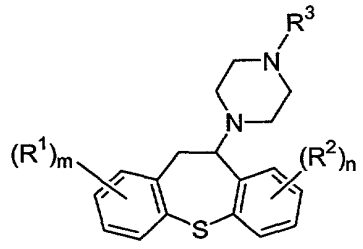
Y^1, Y^2, Y^3 and Y^4 are each independently members selected from the group consisting of N and C-R^2, wherein R^2 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino;

Z^1 is a divalent moiety selected from the group consisting of (C_1-C_3)alkylene;

Z^2 is a divalent moiety selected from the group consisting of –O-, -S- and -N(R^3)- wherein R^3 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino; and

N^{Het} is a substituted or unsubstituted 4-, 5-, 6-, or 7-membered nitrogen heterocycle.

42. The method of claim 38, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

the subscripts m and n are independently integers of from 0 to 3;

R^1 and R^2 are substituents independently selected from the group consisting of halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)alkylthio, (C_1-C_4)haloalkyl, (C_1-

C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino; and

R^3 is a substituent selected from the group consisting of (C_1-C_4)alkyl, (C_1-C_4)haloalkyl and (C_1-C_4)acyl.

43. The method of claim 32, wherein contacting comprises placing a patch containing the compound on the skin of the patient.

44. The method of claim 32, further comprising providing a collection apparatus, the collection apparatus comprising the collector and a circuit, wherein

the circuit (i) comprises an outlet line and a return line, (ii) is adapted for connection to the blood system of a patient and the flow of withdrawn blood therethrough, and (iii) is in fluid communication with the collector;

withdrawing comprises withdrawing blood from the patient via the outlet line and flowing withdrawn blood through the collector; and

recirculating comprises recirculating the blood back to the patient via the return line.

45. The method of claim 32, wherein the patient is a mammal.

46. The method of claim 44, wherein the patient is a non-human mammal.

47. A method for assessing mutations in cytomegalovirus (CMV), the method comprising:

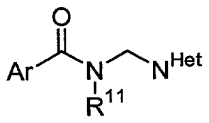
(a) collecting CMV and/or at least one CMV infected cell from a patient infected with CMV by contacting the blood or a tissue of the patient with a compound that binds CMV and/or a CMV infected cell, whereby CMV or at least one CMV infected cell is bound from the blood or tissue; and

(b) detecting the presence and/or absence of a mutation in CMV obtained from the CMV or the at least one CMV infected cell collected in step (a).

48. The method of claim 47, wherein contacting comprises withdrawing blood containing CMV from the patient and flowing the blood into or through a collector that comprises the compound, whereby CMV in the blood is captured by the compound of the collector.

49. The method of claim 48, wherein the compound is a ligand for CMV US28.

50. The method of claim 49, wherein the compound has the formula:



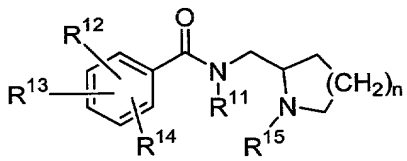
or is a pharmaceutically acceptable salt thereof; wherein

Ar is a substituted aryl group;

R^{11} is a member selected from the group consisting of H and substituted or unsubstituted (C_1-C_4)alkyl; and

N^{Het} is a substituted or unsubstituted 4-, 5-, 6-, or 7-membered nitrogen heterocycle.

51. The method of claim 49, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

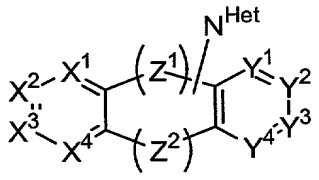
the subscript n is an integer of from 1 to 3;

R^{11} and R^{15} are members independently selected from the group consisting of H and substituted or unsubstituted (C_1-C_4)alkyl;

R^{12}, R^{13} and R^{14} are each members independently selected from the group consisting of H, hydroxy, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino and di(C_1-C_4)alkylamino;

with the proviso that at least one of R^{12}, R^{13} and R^{14} is other than H.

52. The method of claim 49, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

X^1, X^2, X^3 and X^4 are each independently members selected from the group consisting of N and C-R^1, wherein R^1 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino;

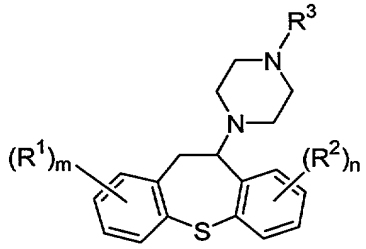
Y^1, Y^2, Y^3 and Y^4 are each independently members selected from the group consisting of N and C-R^2, wherein R^2 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino;

Z^1 is a divalent moiety selected from the group consisting of (C_1-C_3)alkylene;

Z^2 is a divalent moiety selected from the group consisting of –O-, -S- and -N(R^3)- wherein R^3 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino; and

N^{Het} is a substituted or unsubstituted 4-, 5-, 6-, or 7-membered nitrogen heterocycle.

53. The method of claim 49, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

the subscripts m and n are independently integers of from 0 to 3;

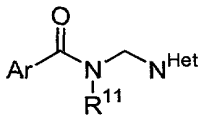
R^1 and R^2 are substituents independently selected from the group consisting of halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)alkylthio, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino; and

R^3 is a substituent selected from the group consisting of (C_1-C_4)alkyl, (C_1-C_4)haloalkyl and (C_1-C_4)acyl.

54. The method of claim 47, wherein collecting comprises placing an implant device that contains the compound in or on the patient such that the implant device is in contact with the blood of the patient, whereby CMV or the at least one CMV infected cell in the blood is captured by the compound of the implant device.

55. The method of claim 54, wherein the compound is a ligand for CMV US28.

56. The method of claim 55, wherein the compound has the formula:



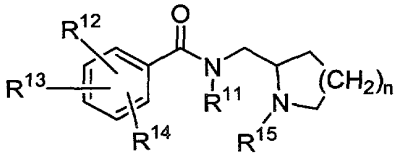
or is a pharmaceutically acceptable salt thereof; wherein

Ar is a substituted aryl group;

R^{11} is a member selected from the group consisting of H and substituted or unsubstituted (C_1-C_4)alkyl; and

N^{Het} is a substituted or unsubstituted 4-, 5-, 6-, or 7-membered nitrogen heterocycle.

57. The method of claim 55, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

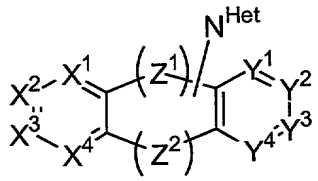
the subscript n is an integer of from 1 to 3;

R^{11} and R^{15} are members independently selected from the group consisting of H and substituted or unsubstituted (C_1-C_4)alkyl;

R^{12}, R^{13} and R^{14} are each members independently selected from the group consisting of H, hydroxy, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino and di(C_1-C_4)alkylamino;

with the proviso that at least one of R^{12}, R^{13} and R^{14} is other than H.

58. The method of claim 55, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

X^1, X^2, X^3 and X^4 are each independently members selected from the group consisting of N and C-R^1, wherein R^1 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino;

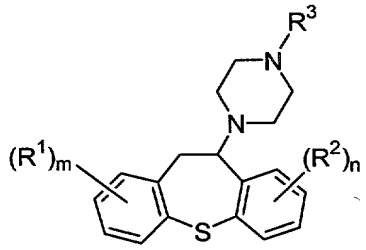
Y^1, Y^2, Y^3 and Y^4 are each independently members selected from the group consisting of N and C-R^2, wherein R^2 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino;

Z^1 is a divalent moiety selected from the group consisting of (C_1-C_3)alkylene;

Z^2 is a divalent moiety selected from the group consisting of –O-, -S- and -N(R^3)- wherein R^3 is a member selected from the group consisting of H, halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)haloalkyl, (C_1-C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino; and

N^{Het} is a substituted or unsubstituted 4-, 5-, 6-, or 7-membered nitrogen heterocycle.

59. The method of claim 55, wherein the compound has the formula:



or is a pharmaceutically acceptable salt thereof; and wherein

the subscripts m and n are independently integers of from 0 to 3;

R^1 and R^2 are substituents independently selected from the group consisting of halogen, (C_1-C_4)alkyl, (C_1-C_4)alkoxy, (C_1-C_4)alkylthio, (C_1-C_4)haloalkyl, (C_1-

C_4)haloalkoxy, nitro, cyano, (C_1-C_4)acyl, amino, (C_1-C_4)alkylamino, and di(C_1-C_4)alkylamino; and

R^3 is a substituent selected from the group consisting of (C_1-C_4)alkyl, (C_1-C_4)haloalkyl and (C_1-C_4)acyl.

60. The method of claim 47, wherein if a mutation is detected, the method further comprises determining whether the mutation confers resistance to a pharmaceutical agent.

61. The method of claim 60, wherein the method further comprises administering the pharmaceutical compound to the patient prior to the collection step.

62. The method of claim 47, wherein collecting comprises placing a transdermal patch containing the compound on the skin of the patient.